



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10:090,058	02/28/2002	Nathan P. Parker	D-2711 WOD	6731

7590 06/17/2003  
William O'Driscoll - 12-1  
The Trane Company  
3600 Pammel Creek Road  
La Crosse, WI 54601

EXAMINER

PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/090,058

Applicant(s)

PATENT

Examiner

PIN 211

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-8, 10, 11, 15, 18-24, 25-33 and 35 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 9, 12-14, 16, 17, 25-27 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

Art Unit: 1724

*Specification*

1. The abstract of the disclosure is objected to because legal phraseology "comprises" is used in the abstract. Correction is required. See MPEP § 608.01(b).

*Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5-8, 10, 11, 15, 18-24, 28-33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (5,273,564; Abstract; 14, 16 & 36 in Fig. 2; 15, 16, 28, 34, 36 & 38 in Figs. 3 & 4; col. 2, lines 26-64; col. 3, lines 7-11).

Hill teaches a filter assembly comprising a plurality of chambers and a filter media having a plurality of pleats distributed over a plurality of chambers, a core including a saw tooth rack having a plurality of peaks and valleys defining a plurality of chambers (see Fig. 2), a rectangular frame comprising a first pair of frame members substantially parallel to each other and a second pair of frame members substantially perpendicular to the first pair of frame members wherein a first end plate is pivotally connected to one frame member of the first pair of frame members and a

Art Unit: 1724

second end plate is pivotally connected to another frame member of the first pair of frame members, a living hinge that pivotally couples the first end plate and the second end plate wherein the side panel defines a hole adapted to receive a protrusion extending from the first end plate and wherein the protrusion is pivotal relative to the first end plate. Hill also teaches a method of inserting a filter media into a core having a plurality of chambers comprising the steps of folding the filter media to create a plurality of pleats, inserting the plurality of pleats in the plurality of chambers and pivoting the end plate into engagement with the filter media. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a filter assembly as taught by Hill with a one piece framework which can be easily assembled and unassembled so that the filter media can be easily installed or removed due to life.

*Allowable Subject Matter*

4. Claims 3, 4, 9, 12-14, 16, 17, 25-27 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: None of the prior arts discloses a saw tooth rack pivotally coupled to the frame by a living hinge and a tie rod connected to the frame and being selectively engaged and disengaged from the saw tooth rack also by a living hinge.

**Art Unit: 1724**

*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Chen (6,319,300 B1) discloses a filter assembly of an air filter.
- Duffy (5,531,892) discloses a filter frame with triangular pleat stabilizing elements.
- Fath et al (6,454,826 B2) disclose a filter cartridge.
- Toyoshima (6,485,538 B1) discloses an air conditioning air filter.
- Goulet et al (4,885,015) disclose a HEPA air filter.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau Pham whose telephone number is (703) 308-1605. The examiner can normally be reached on Monday-Friday (except Wednesday) from 7:15 a.m. to 5:45 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached on (703) 308-3792. The fax phone number for this Group is (703) 872-9310 (non-finals) or (703) 872-9311 (after-finals).

Art Unit: 1724

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.



**Minh-Chau Pham**

**Patent Examiner**

June 12, 2003